

**Vicia benghalensis L. (Fabaceae)**  
**Purple Vetch**

**Description.** Annual, stems vine-like or reclining, 2-8 dm long, villosulous to puberulent. Leaves alternate, 4-10 cm long, pinnately compound, leaflets 10-18, 10-25 mm long, 1.5-6 mm wide, elliptic to oblong, the leaf apex modified into a tendril; stipules entire to dentate. Inflorescence terminal or in upper axils, pedunculate, equal or shorter than the subtending leaves, usually composed of 3-12 flowers arranged along one side of the axis. Calyx tubular, swollen at the base, villous, lobes 5, unequal in length, the apices plumose; corolla papilionaceous, 10-18 mm long, reddish purple, petals often darker near the tip; stamens 10; ovary superior, the style with a tuft of minute hairs at the tip. Fruits 2.5-4 cm long, ca. 1 cm wide, puberulent, with a stalk-like base ca. 1.5 mm long, with 3-6 seeds. In California, flowering from March to June. (Ball 1968, Clapham et al. 1962, Hermann 1960, Isely 1993, Munz 1959).

Synonym= *V. atropurpurea* Desf.

**Note:** In Abrams (1944), *V. benghalensis* was apparently confused with and included in the closely related *V. villosa* and *V. cracca* L. Both of the latter species are characterized by glabrous fruits and racemes that are usually longer than the subtending leaves (Ball 1968). *V. villosa* is widely distributed in California and is further characterized by having calyces swollen at the base (like *V. benghalensis*). *Vicia cracca*, which may be a waif in California rather than naturalized (Isely 1993), does not have swollen calyces. All three species have pedunculate inflorescences, whereas *V. sativa* (common vetch) has subsessile, axillary flowers that are much shorter than the subtending leaf (Ball 1968, Isely 1993).

*Vicia sativa* L. has been treated as including at least 6 subspecies (Ball 1968), of which two, ssp. *nigra* (L.) Ehrh. (synonym = *V. angustifolia* (Wahlenb.) Roth, *V. sativa* var. *angustifolia* L.) and ssp. *sativa* are known to be naturalized in the United States (Barneby 1989, Fernald 1950, Gleason and Cronquist 1991). Both forms have been widely cultivated for agricultural purposes (Barneby 1989), but have not become widely naturalized, at least in the arid west (Barneby 1989).

**Geographic distribution.** A native of Mediterranean Europe, *Vicia benghalensis* has become naturalized in California, Australia, and southern Africa (Arnold and de Wet 1993, Chapman 1991, Hermann 1960, Isely 1993).

The first report of *Vicia benghalensis* in California (as *V. atropurpurea*) was from Humboldt Bay (Jepson 1936). Earlier introductions may have been likely, because of earlier confusion with other introduced species. Both *V. villosa* and *V. cracca*, for example, were first reported as locally introduced (Humboldt, Modoc, and San Bernardino counties) by the end of the 19th century (Robbins 1940). *Vicia sativa* (common vetch), a native of Europe, has been widely cultivated and occasionally naturalized throughout most temperate climates (Arnold and de Wet 1993, Chapman 1991, Fernald 1950, Hermann 1960, Ohwi 1965, Webb et al. 1988), and was widespread in California by the mid 1800s (Robbins 1940).

Both *Vicia benghalensis* and *V. sativa* are known from Anacapa and Santa Cruz islands (Junak et al. 1997) and are widespread throughout much of California west of the Sierra Nevada (Anonymous 1998; Isely 1993).

**Reproductive and vegetative biology.** Close relatives (e.g., *Vicia sepium*, *Lathyrus* spp) are self-compatible, partly self-pollinating, and visited primarily by small bees (Kay 1978, Proctor et al. 1996). No other literature was found that reported on the reproductive biology of *Vicia benghalensis*, *V. sativa*, or *V. villosa*.

**Ecological distribution.** Both purple and common vetch occur in disturbed sites of roadsides, fields, and waste places (Clapham et al. 1962, Isely 1993, Munz 1959). Purple vetch is widespread but not common in California coastal prairie (Heady et al. 1988).

**Weed status.** Neither *Vicia benghalensis*, *V. villosa*, nor *V. sativa* are considered noxious weeds in agricultural or horticultural practice, at least at a global level (not listed by Holm et al. 1977), nor are they considered noxious weeds by the State Dept. of Food and Agriculture (Anonymous 1996). Except for *V. sativa* (under the name *V. angustifolia*) they are not listed as weeds in the United States in Lorenzi and Jeffery (1987).

**Microbial and insect pathogens.** Based on a survey of mycological literature El-Gazzar (1981) reported that *Vicia* spp. were known to be host to several species of the rust fungus *Uromyces*. A companion survey of entomological literature revealed that *Vicia* spp. served as hosts to several different Bruchid beetles (Johnson 1981). No other literature was found pertinent to microbial or insect pathogens of either *Vicia benghalensis*, *V. sativa*, or *V. villosa*.

**Herbicide control.** No literature was found pertinent to herbicide control of *Vicia benghalensis* or *V. villosa*. The use of dicamba or 2,4-D for controlling *V. sativa* (under the name *V. angustifolia*) and other species (e.g., *V. dasycarpa*) was suggested by Lorenzi and Jeffery (1987).

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